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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,792	05/04/2001	Christopher S. Churchill	119068-1000	7893

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EXAMINER
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GLESSNER, BRIAN E

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/848,792

Applicant(s)

CHURCHILL ET AL.

Examiner

Brian E. Glessner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 25 July 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The following office action is in response to the amendment and remarks filed on July 25, 2003. Claims 1-39 are pending in the application. Claims 1-19 are withdrawn from consideration as being drawn to a non-elected invention. Claims 20-39 are rejected as set forth below.

#### *Drawings*

The proposed drawing correction submitted by the applicant has been received and is acceptable. Therefore, the drawing objection made in the previous office action is hereby withdrawn.

#### *Claim Objections*

1. Claim 39 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 38 and 39 are both dependent upon claim 33, and claims 38 and 39 are both claiming the identical limitations. Therefore, claim 39 fails to further limit claim 33.

#### *Claim Rejections - 35 USC § 103*

1. Claims 20-23 stand and claims 24-29, 31-33, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruggie et al. (5,887,402) in view of Grantham et al. (6,528,175) and the article "**THE RICE STRAW DEMONSTRATION PROJECT FUND**" Proposed Grant Awards For Fiscal Year 1998-99 Presented for the California Air Resources Board's Consideration On April 22, 1999, hereafter referred to as "the rice straw article".

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In regard to claims 20 and 23, Ruggie discloses a fire resistant door (column 3, lines 55-62) comprising an inner core 70 comprising a fiberboard in a resin matrix (column 9, lines 30-41), a doorframe 20, and one or more door skins 11, 11A. Ruggie does not specifically disclose that said core comprises milled rice straw fiber or that the doorframe comprises a fire resistant material. Grantham teaches that it is known to form doorframes and door cores out of a fiberboard material that is fire resistant (column 2, lines 39-55). The rice straw article teaches that it is known to produce fiberboard panels using a rice straw material, wherein the panels are used for door cores. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the door frame out of a fire resistant material, because if the door is fire resistant, but the frame is not, the fire will merely burn through the frame until the door collapses from lack of support. Therefore, if the frame is made of fire resistant material, the entire doorway will not burn when exposed to the flames.

In regard to the core material, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use rice straw in the fiberboard in place of Ruggie's fiber, because the rice straw is less expensive and also has an inherent fire resistance when compressed. Therefore, the rice straw will provide a better fire resistant core for the door structure than that of a conventional wood fiberboard panel. The examiner would like to point out that Ruggie teaches the use of fibers in a resin matrix.

In regard to claim 21, Ruggie in view of Grantham and the rice straw article disclose the basic claimed invention, except for specifically disclosing that the milled straw fiber has an average longitudinal length of approximately .125 inches to 1.5 inches. It would have been obvious to one having ordinary skill in the art at the time the invention was made to mill the

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fibers to the above length, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. By having the length of the fibers within the above range, they will be easier to work with than if they were extremely long or short.

In regard to claim 22, Ruggie in view of Grantham and the rice straw article disclose the basic claimed invention, wherein the door core further comprises a fire retardant material comprising sodium silicate. Grantham teaches that it is known to incorporate a sodium silicate material into fire doors and doorjamb materials, column 2, lines 47-67 and column 3, lines 1-12.

In regard to claim 23, Ruggie in view of Grantham and the rice straw article disclose the basic claimed invention, further comprising one or more door skins 31, 31A.

In regard to claims 24 and 25, Ruggie in view of Grantham and the rice straw article disclose the basic claimed invention, wherein the resin comprises at least 2% by weight of the door core and less than 10% by weight of the door core, column 9, lines 26-31.

In regard to claim 26, Ruggie in view of Grantham and the rice straw article disclose the basic claimed invention, wherein the resin comprises one or more of polyisocyanate, phenol, or a urea formaldehyde, column 9, lines 31-35.

In regard to claims 27-29, 31-33, and 36-39, Ruggie in view of Grantham and the rice straw article disclose the basic claimed invention. Claims 27-29, 31-33, and 36-39 contain the same limitations claimed in claims 20, 22, and 24-26. Therefore, claims 27-29, 31-33, and 36-39 are rejected on the same grounds of rejection set forth above with respect to claims 20, 22, and 24-26.

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2. Claims 30, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruggie et al. (5,887,402) in view of Grantham et al. (6,528,175) and the article **“THE RICE STRAW DEMONSTRATION PROJECT FUND”** Proposed Grant Awards For Fiscal Year 1998-99 Presented for the California Air Resources Board’s Consideration On April 22, 1999, hereafter referred to as “the rice straw article” and further in view of Markessini et al. (6,346,165).

In regard to claims 30 and 34, Ruggie in view of Grantham and the rice straw article disclose the basic claimed invention except for specifically disclosing that said resin comprises polyisocyanate. However, Ruggie teaches that “Numerous useful binders for the manufacture of fiberboard are known in the art”, column 9, lines 31-32. Markessini teaches that it is known to use polyisocyanate binders (resins) to bond fiberboard fibers together, wherein the fiberboard fibers could be wood or rice straw, column 1, lines 32-36 and lines 61-65. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a polyisocyanate binder/resin to bind the fibers together to form the panels, because the use of polyisocyanate resins to bond fibers together is well known and widely practiced as taught by Markessini. Further, polyisocyanate will produce a strong panel that has the fibers securely held together.

In regard to claim 35, Ruggie in view of Grantham, the rice straw article, and Markessini disclose the basic claimed invention, wherein the resin comprises 100% polyisocyanate. Markessini teaches that the adhesives could be acid curing amino-formaldehyde resins, alkaline curing phenol-formaldehyde resins, as well as polyisocyanate adhesives. Markessini teaches the use of any of these resins. He does not teach that the resins are used together. Therefore, if one

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merely used the polyisocyanate resin, 100% of the resin would obviously be polyisocyanate resin.

***Response to Arguments***

3. Applicant's arguments filed 7/25/03 have been fully considered but they are not persuasive.

In response to the applicant's argument that the examiner has not established that each of the numerous limitations present in the original claims 20-23 is found in the cited references, the examiner respectfully disagrees. First of all, the applicant has not pointed out any limitations that were not disclosed. Therefore, the examiner is not certain as to which limitations are supposedly missing. Claims 20 contains the limitations of a fire resistant door having an inner door core comprised of milled rice straw fiber in a cured resin and a fire resistant door frame. As pointed out above, Ruggie discloses a fire resistant door (column 3, lines 55-62) comprising an inner core 70 made of fiberboard in a cured resin matrix. Grantham teaches that it is known to form doorframes and door cores out of a fiberboard material that is fire resistant (column 2, lines 39-55), and the rice straw article teaches that it is known to produce fiberboard panels using a rice straw material, wherein the panels are used for door cores. Thus, when the teachings of Grantham and the rice straw article are incorporated into Ruggie's invention, all of the elements are disclosed by the references. For example, Ruggie teaches the fire resistant door, door core, and resin matrix. Grantham teaches the fire resistant door frame, and the rice straw article teaches that it is known to substitute rice straw fiber for the fiber in convention wood fiberboard panels.

In regard to claim 21, the examiner pointed out that the references did not disclose the specific length fibers, but that it would have been obvious to cut the fibers to the claimed length.

Finally, in regard to claim 22, the examiner clearly pointed out that Grantham teaches that it is known to add a fire retardant material comprising sodium silicate into fire doors and doorjamb materials, column 2, lines 47-67 and column 3, lines 1-12. Therefore, the examiner does not know what elements the applicant believes are not shown since the applicant did not refer to any specific elements.

The applicant also states that they disagree with the examiner as to what the references teach. Once again, the examiner does not know what exactly the applicant disagrees with since they have not pointed out any examples to the examiner. Thus, the examiner cannot address any specific discrepancies.

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner has pointed out motivation to combine the references. The rice straw article teaches that the use of rice straw fiber in place of wood fiber is cheaper and rice straw naturally has a fire resistant property when compressed. Also, by making the doorframe, as well as the door core fire resistant, the overall door will be fire resistant longer. Therefore, the



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combination would be successful because the door structure will be cheaper to produce and will have a longer fire rating.

*Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian E. Glessner whose telephone number is 703-305-0031. The examiner can normally be reached on Monday-Friday 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on 703-308-0839. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

B.G.

October 2, 2003

  
BRIAN E. GLESSNER  
PATENT EXAMINER